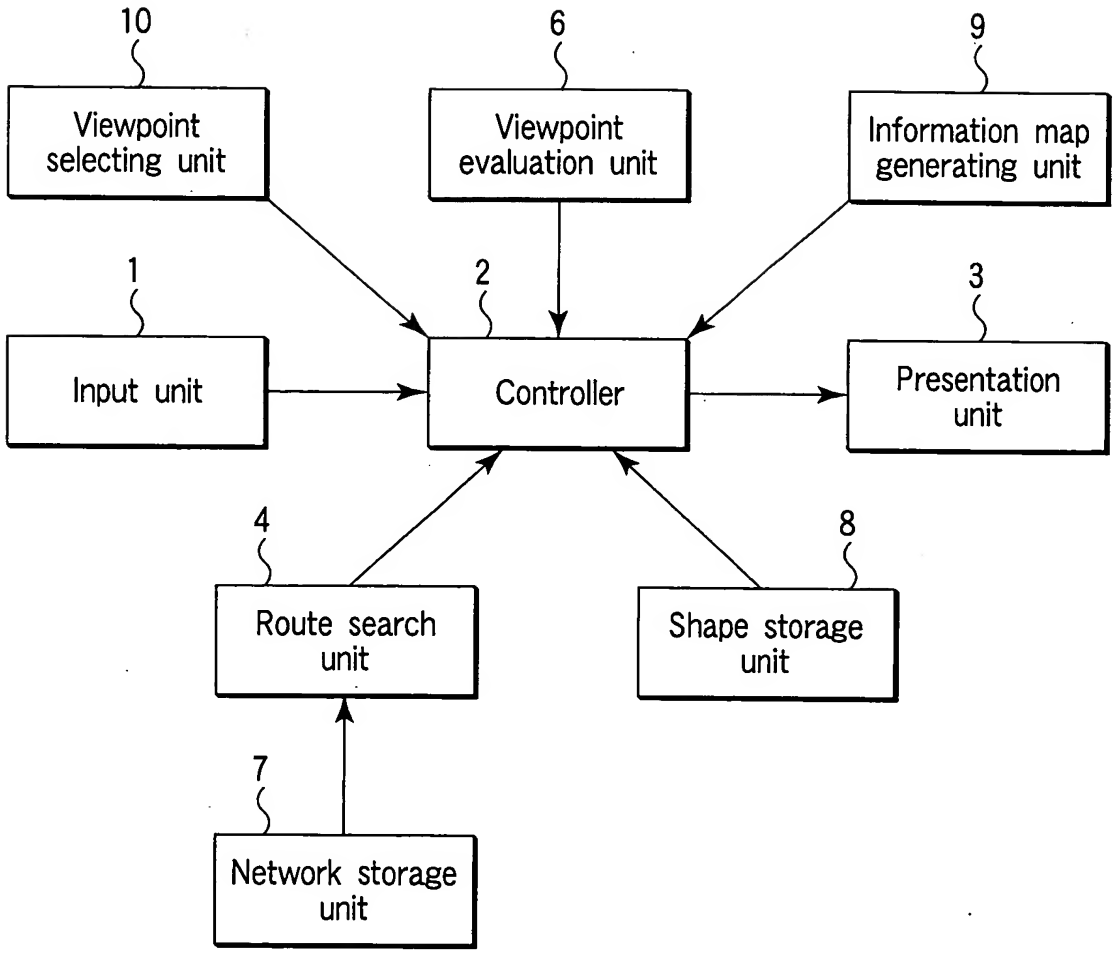
10
Viewpoint selecting unit
6
Viewpoint evaluation unit
9
Information map generating unit
1
Input unit
2
Controller
3
Presentation unit
4
Route search unit
8
Shape storage unit
7
Network storage unit

FIG. 1

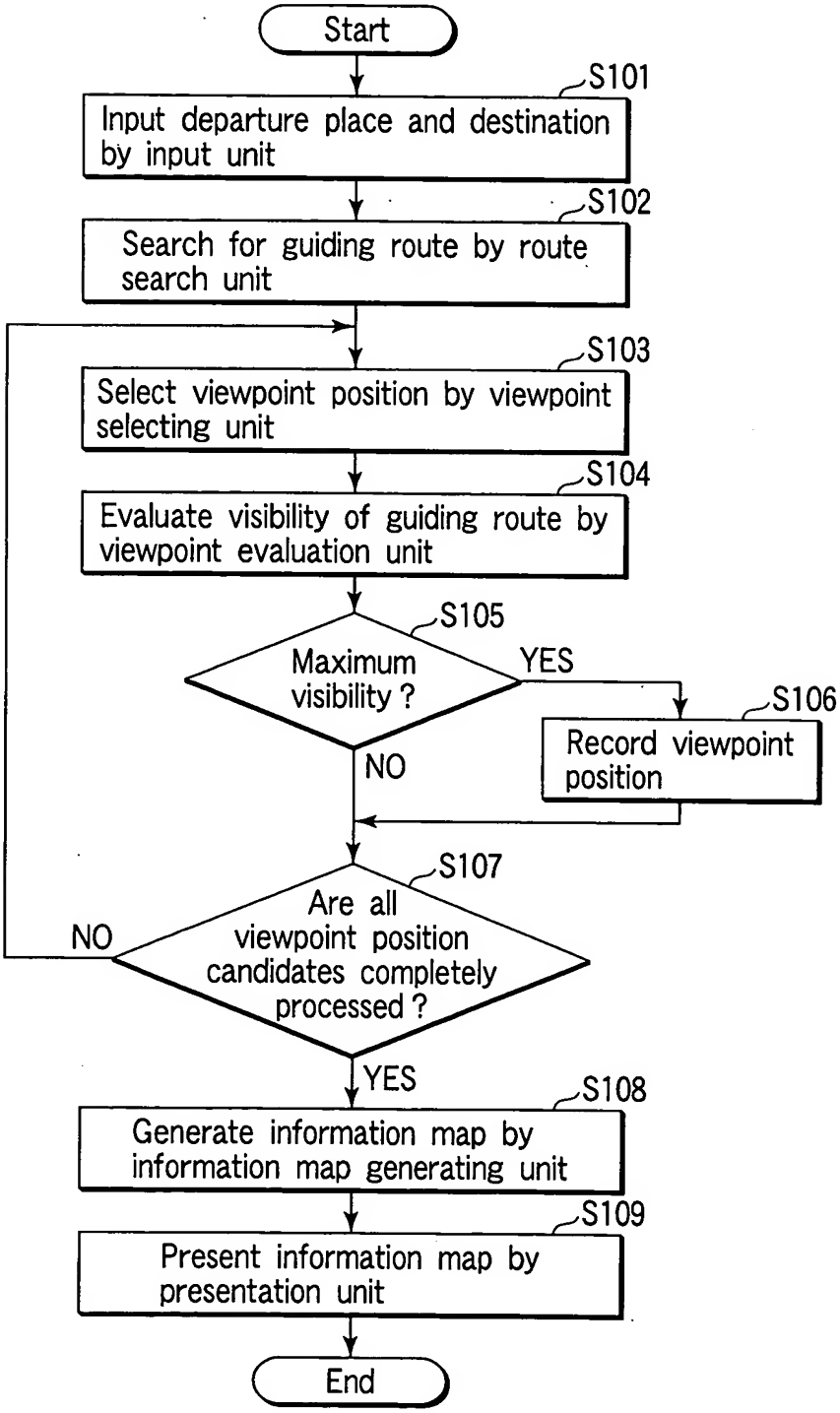
Start
S101
Input departure place and destination by input unit
S102
Search for guiding route by route search unit
S103
Select viewpoint position by viewpoint selecting unit
S104
Evaluate visibility of guiding route by viewpoint evaluation unit
S105
Maximum visibility ?
YES
S106
Record viewpoint position
NO
S107
Are all viewpoint position candidates completely processed ?
NO
YES
S108
Generate information map by information map generating unit
S109
Present information map by presentation unit
End

FIG. 2

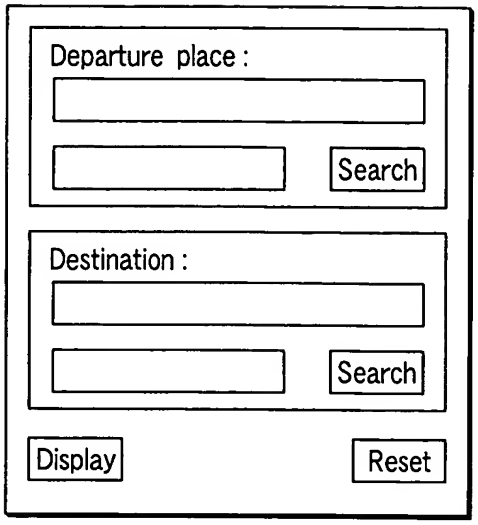

FIG. 3A

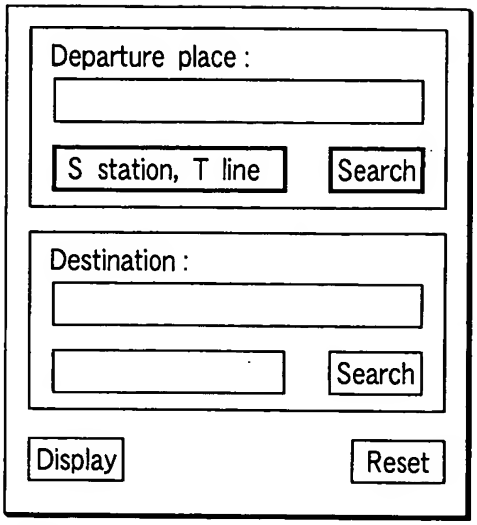

FIG. 3B

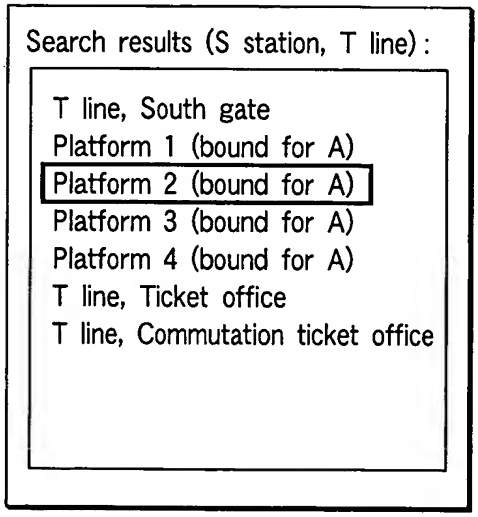

FIG. 3C

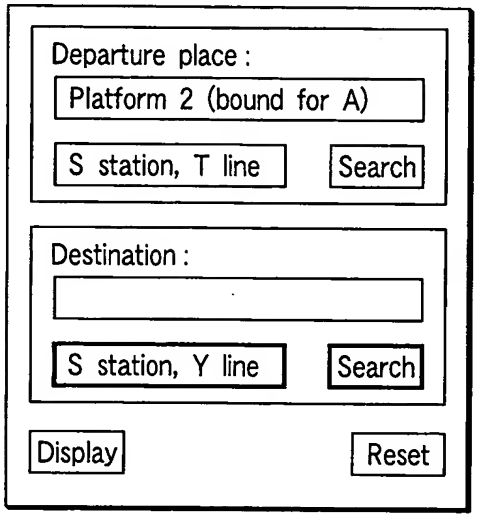

FIG. 3D

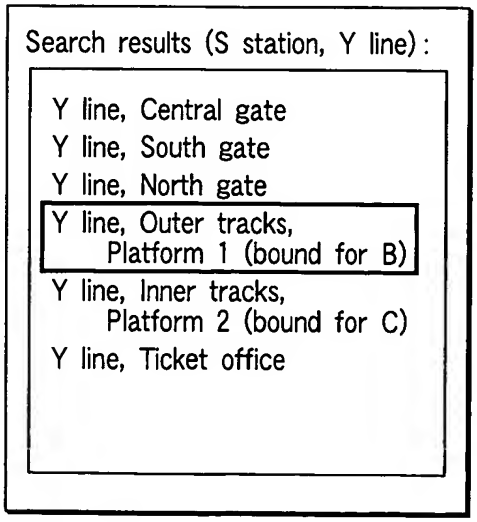

FIG. 3E

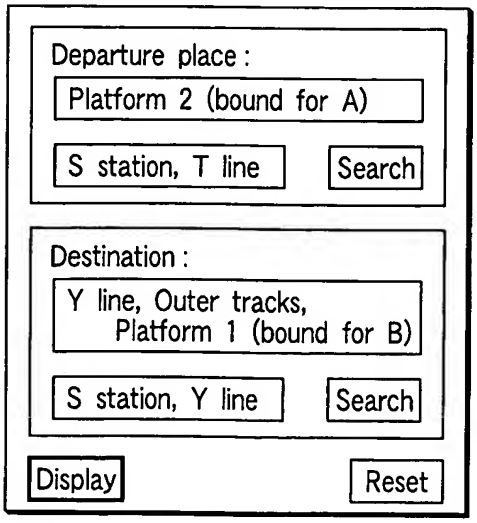

FIG. 3F

Point ID	Three-dimensional coordinates
10	(-8,6,0)
11	(-7,6,0)
12	(-6,6,0)
13	(-7,5,0)
20	(-7,0,5)
21	(-4,0,5)
22	(-3,0,5)
23	(-4,-2,5)

FIG. 4C

Start point ID	End point ID
10	11
	13
11	10
	12
	13
12	11
	13
13	10
	11
	12
	20
20	13
	21
21	20
	22
	23
22	21
23	21

FIG. 4B

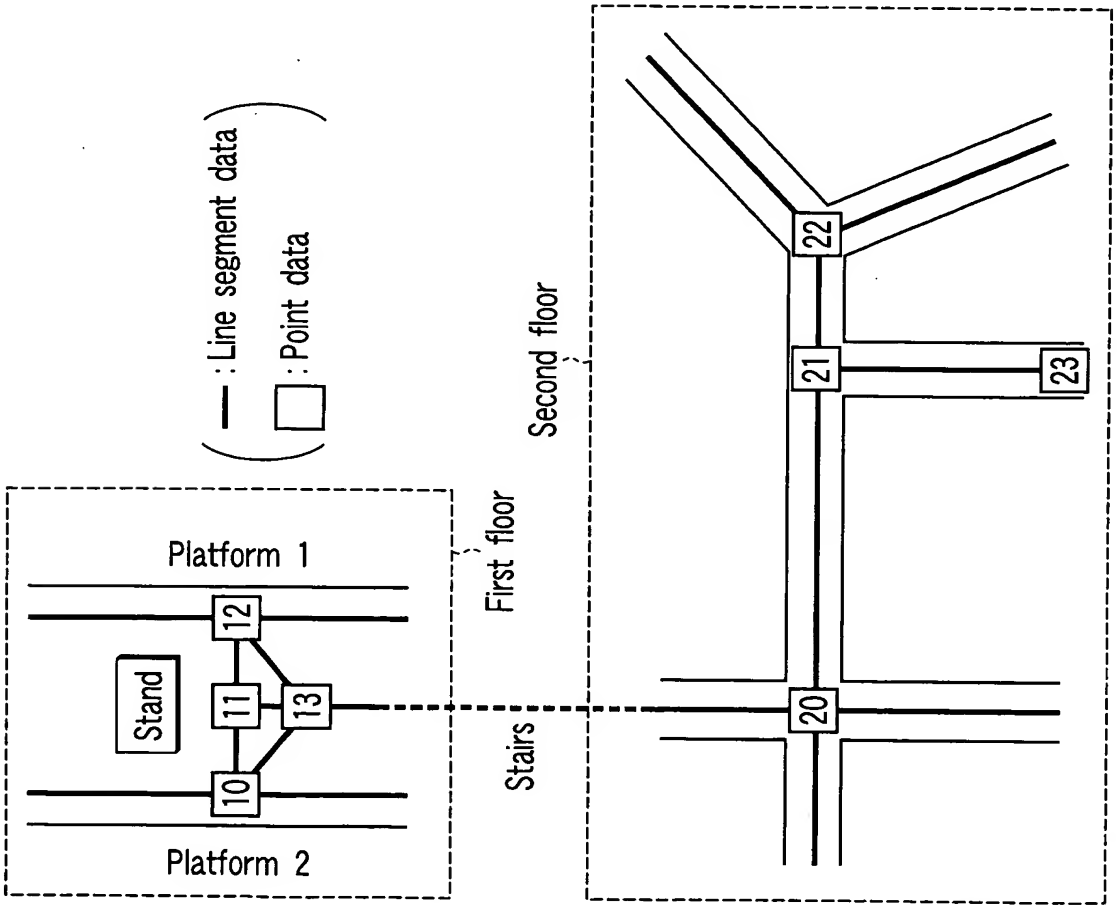

FIG. 4A

Start point ID	End point ID
13	10
20	13
21	20
23	21

FIG. 5B

Point ID	Three-dimensional coordinates
10	(-8,6,0)
13	(-7,5,0)
20	(-7,0,5)
21	(-4,0,5)
23	(-4,-2,5)

FIG. 5C

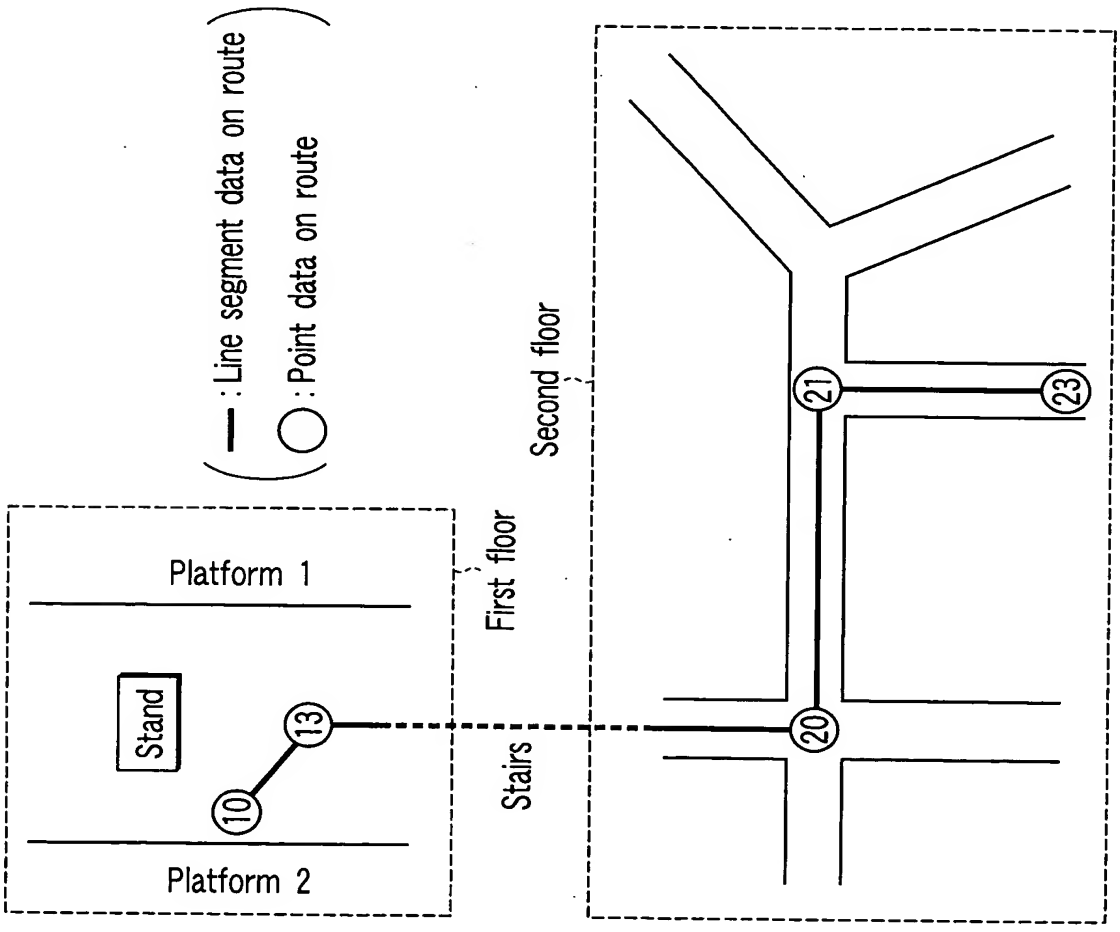

FIG. 5A

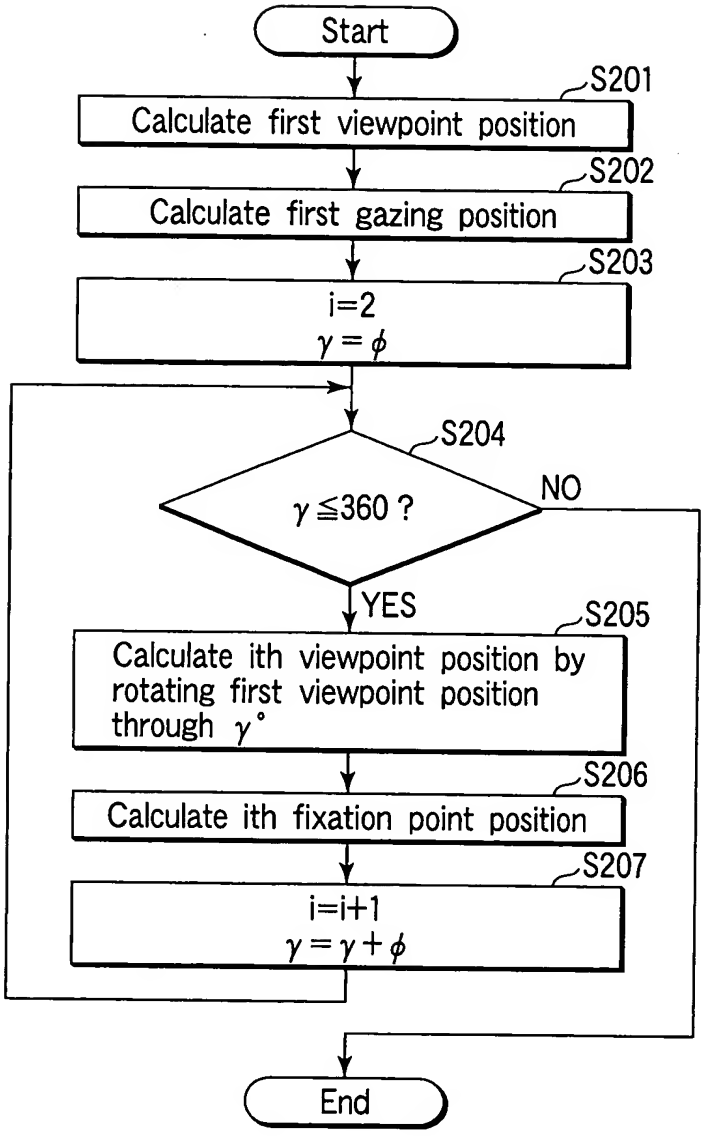
Start
S201
Calculate first viewpoint position
S202
Calculate first gazing position
S203
i=2
$\gamma = \phi$
S204
$\gamma \leqq 360$?
NO
YES
S205
Calculate ith viewpoint position by rotating first viewpoint position through $\gamma°$
S206
Calculate ith fixation point position
S207
i=i+1
$\gamma = \gamma + \phi$
End

FIG. 6

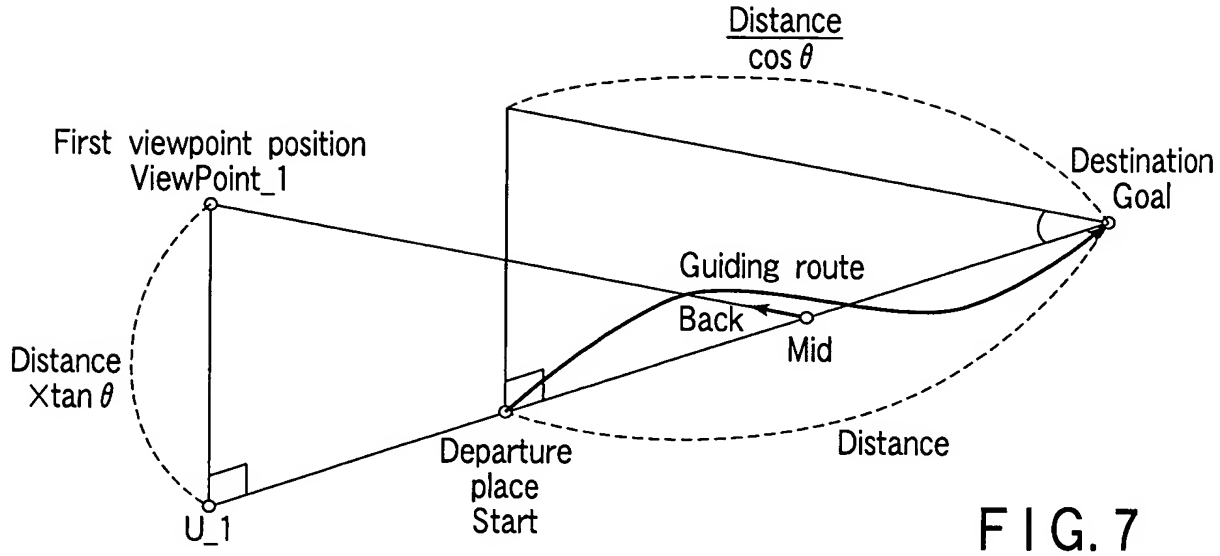

FIG. 7

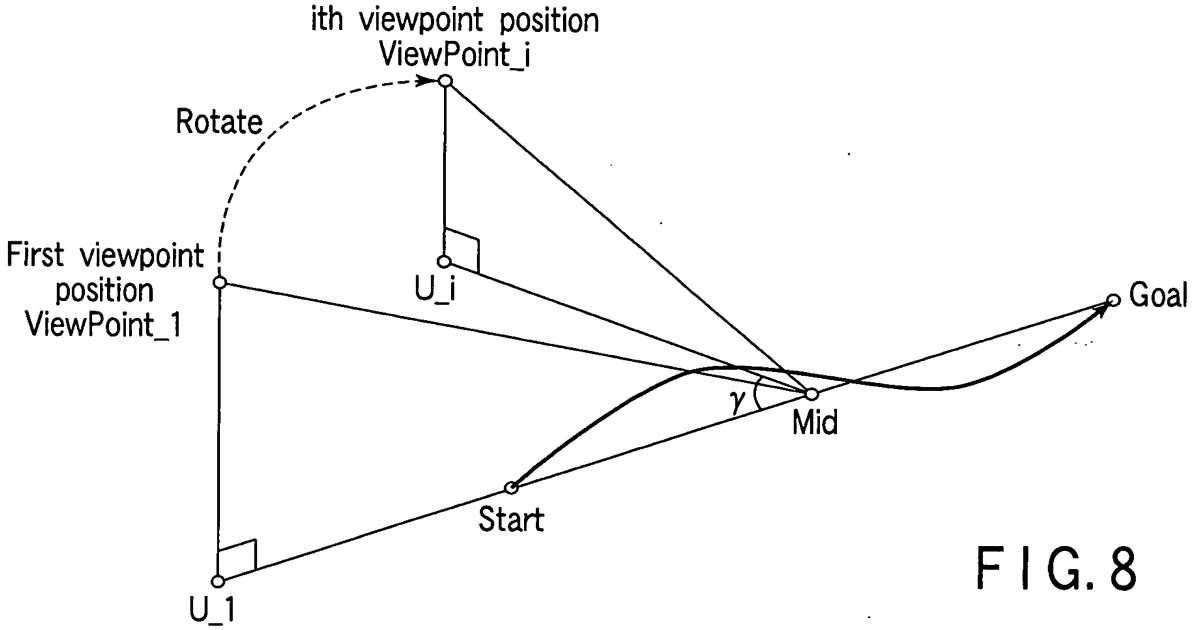

FIG. 8

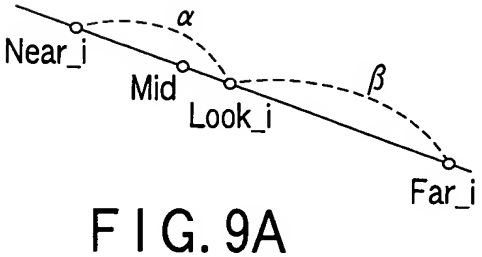

FIG. 9A

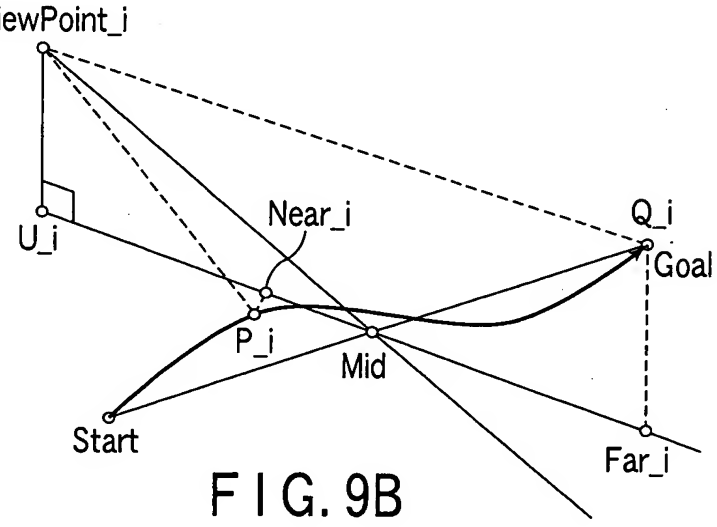

FIG. 9B

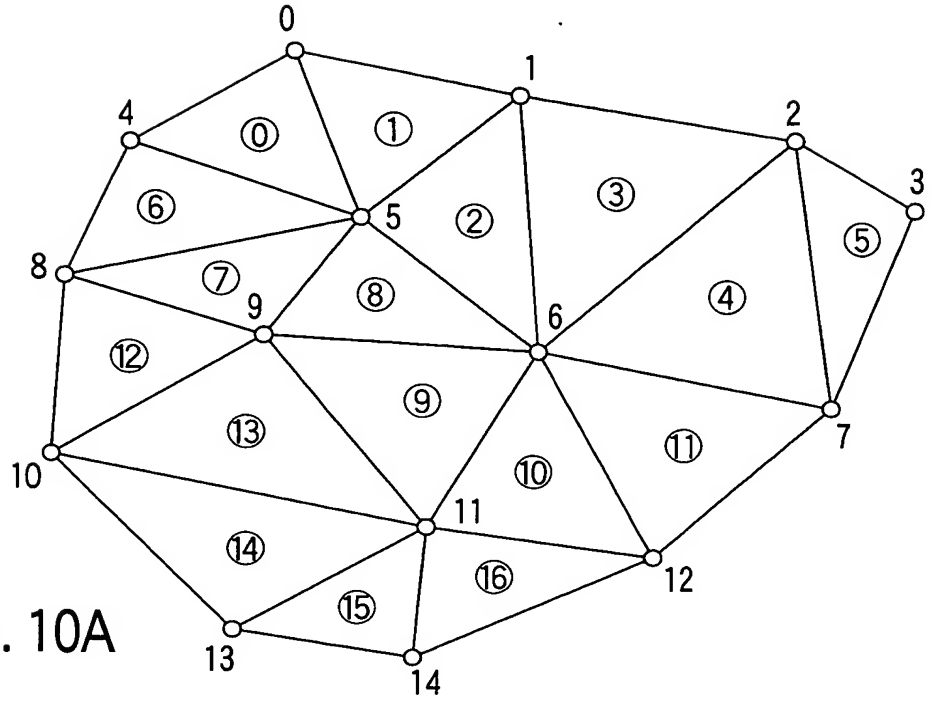

FIG. 10A

Point ID	Three-dimensional coordinates
0	(−7.5,6.0,0.0)
1	(−4.5,5.7,0.0)
2	(−1.5,5.2,0.0)
3	(0.2,4.5,0.0)
4	(−9.2,5.2,0.0)
5	(−6.5,4.2,0.0)
6	(−4.5,2.5,0.0)
7	(−0.7,1.7,0.0)
8	(−10.2,3.5,0.0)
9	(−7.7,2.7,0.0)
10	(−10.2,1.2,0.0)
11	(−5.7,0.2,0.0)
12	(−3.0,−0.2,0.0)
13	(−8.2,−1.2,0.0)
14	(−5.8,−1.5,0.0)

FIG. 10B

Triangle ID	Line segment ID	Line segment ID	Line segment ID
0	1	14	16
1	2	17	3
2	5	19	22
3	6	23	7
4	9	25	29
5	10	30	11
6	15	34	18
7	35	37	20
8	21	38	24
9	41	46	26
10	27	49	52
11	28	53	31
12	36	43	39
13	40	44	47
14	45	57	48
15	50	58	59
16	51	60	54

FIG. 12

Line segment ID	Start point ID	End point ID
0	0	1
1	0	4
2	0	5
3	1	0
4	1	2
5	1	5
6	1	6
7	2	1
8	2	3
9	2	6
10	2	7
11	3	2
12	3	7
13	4	0
14	4	5
15	4	8
16	5	0
17	5	1
18	5	4
19	5	6
20	5	8
21	5	9
22	6	1
23	6	2
24	6	5
25	6	7
26	6	9
27	6	11
28	6	12
29	7	2
30	7	3
31	7	6
32	7	12
33	8	4
34	8	5
35	8	9
36	8	10
37	9	5
38	9	6
39	9	8
40	9	10
41	9	11
42	10	8
43	10	9
44	10	11
45	10	13
46	11	6
47	11	9
48	11	10
49	11	12
50	11	13
51	11	14
52	12	6
53	12	7
54	12	11
55	12	14
56	13	10
57	13	11
58	13	14
59	14	11
60	14	12
61	14	13

FIG. 11

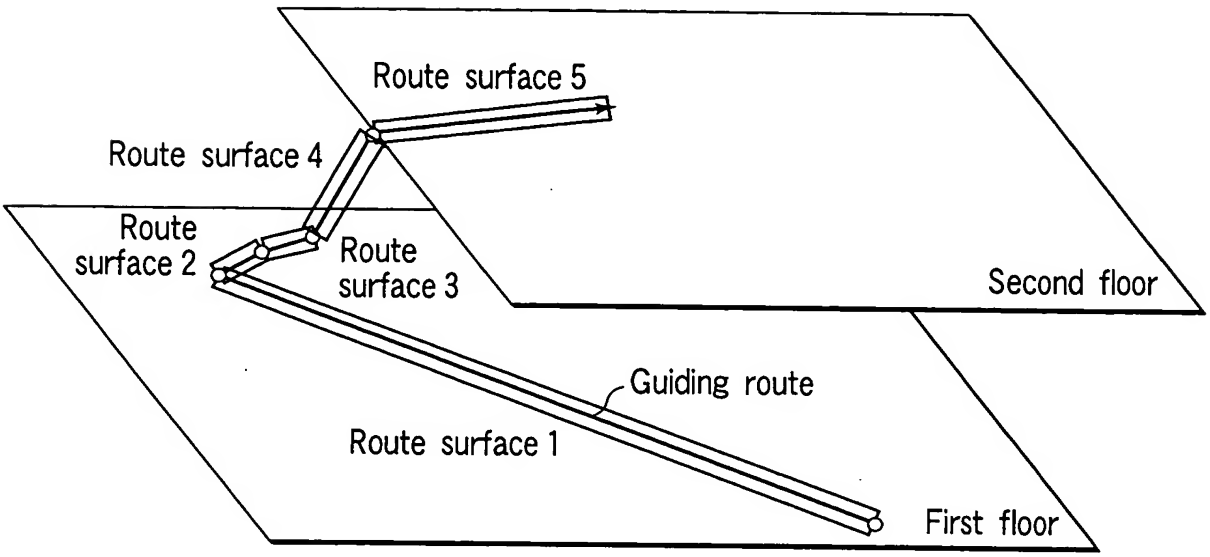

FIG. 13

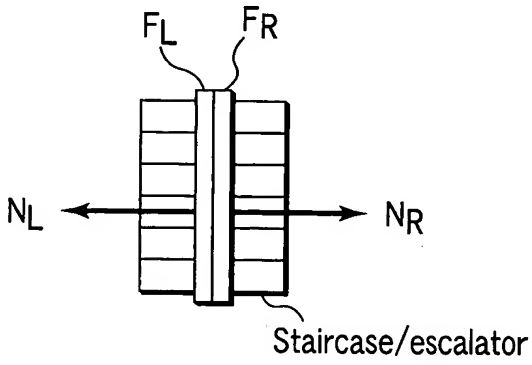

FIG. 14A

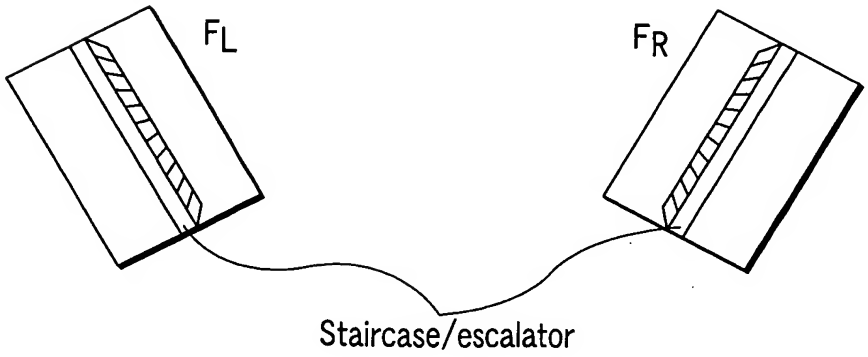

FIG. 14B

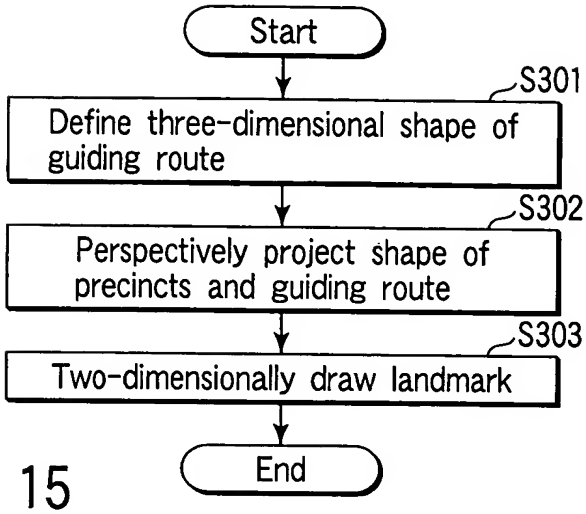

FIG. 15

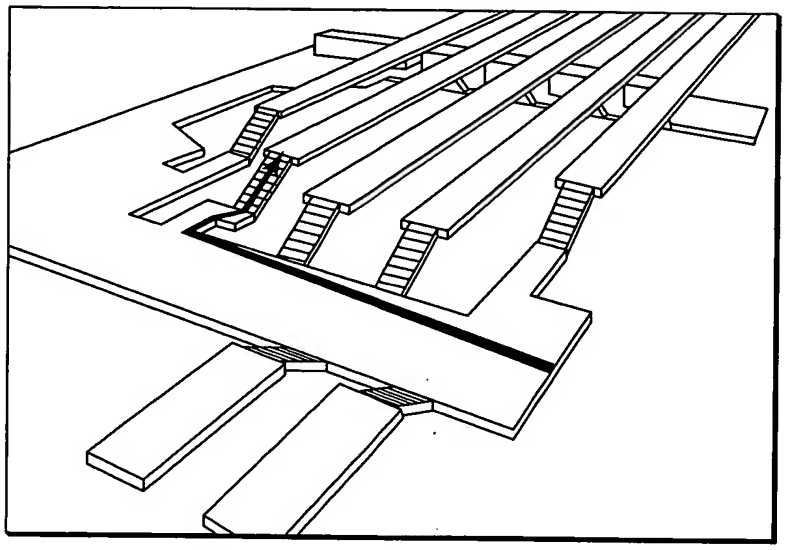

FIG. 16A

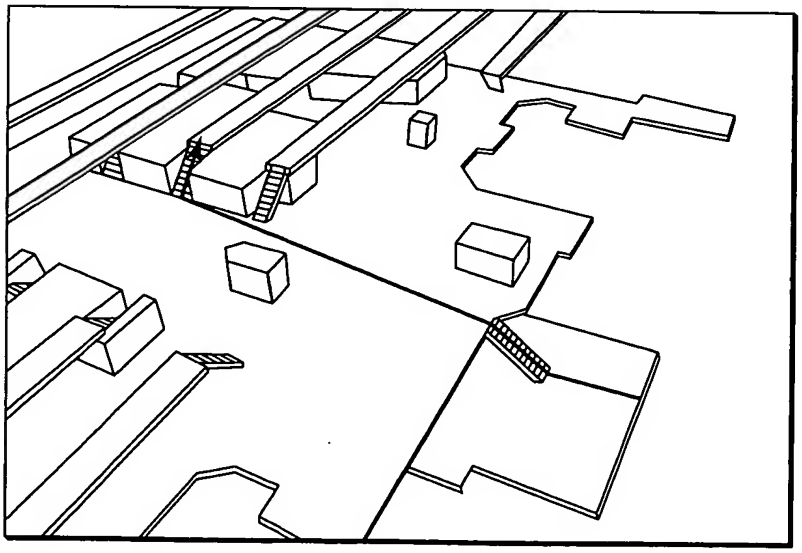

FIG. 16B

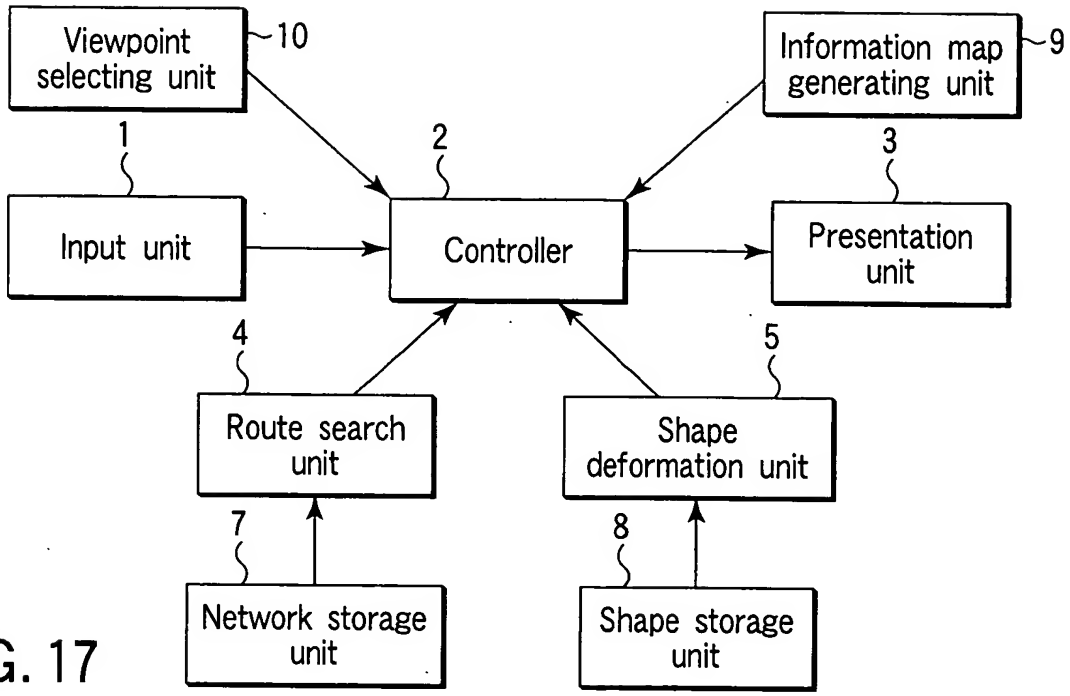
Viewpoint selecting unit
10
Information map generating unit
9
1
2
3
Input unit
Controller
Presentation unit
4
5
Route search unit
Shape deformation unit
7
8
Network storage unit
Shape storage unit

FIG. 17

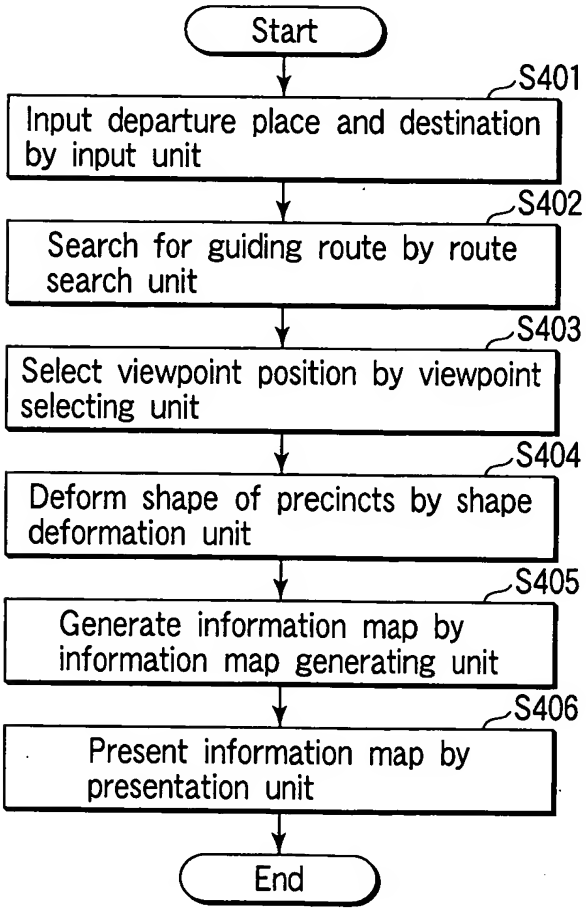
Start
S401
Input departure place and destination by input unit
S402
Search for guiding route by route search unit
S403
Select viewpoint position by viewpoint selecting unit
S404
Deform shape of precincts by shape deformation unit
S405
Generate information map by information map generating unit
S406
Present information map by presentation unit
End

FIG. 18

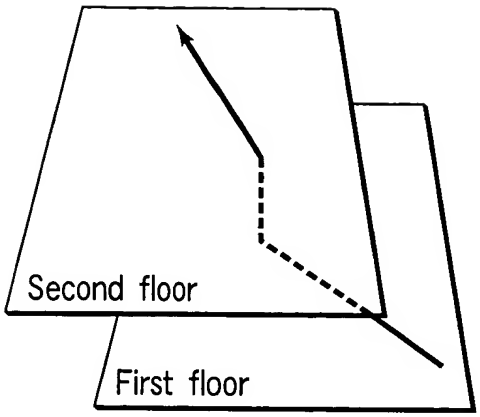

FIG. 19A

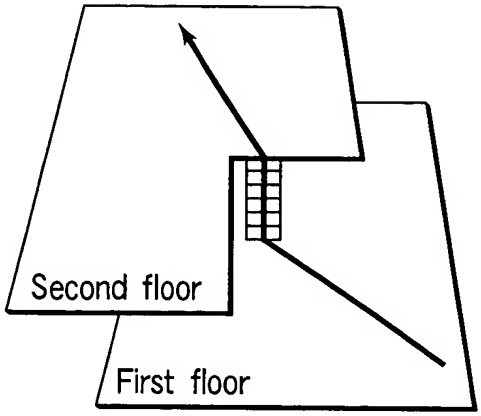

FIG. 19B

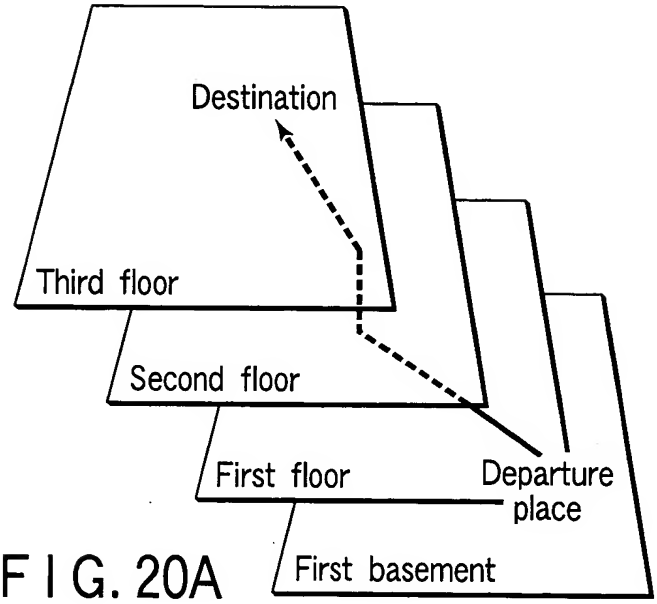

FIG. 20A

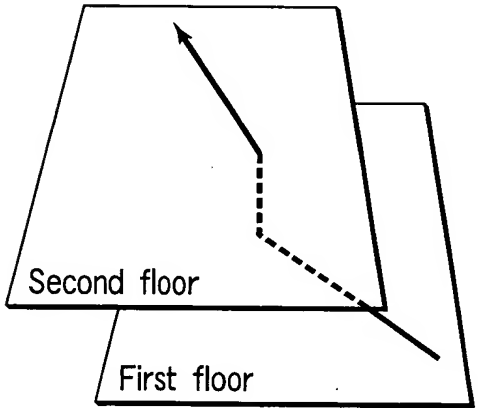

FIG. 20B

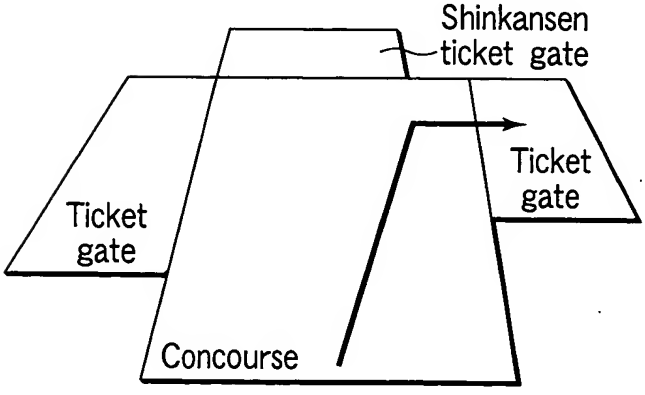

FIG. 21A

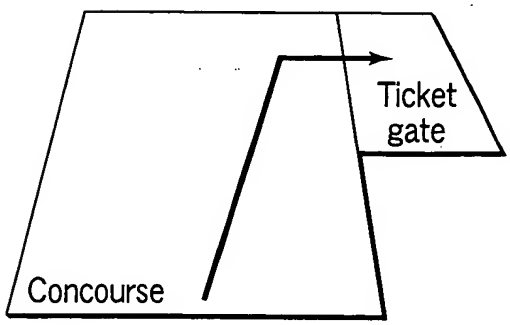

FIG. 21B

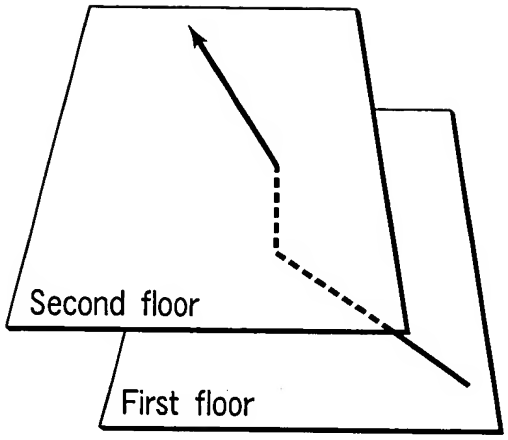

FIG. 22A

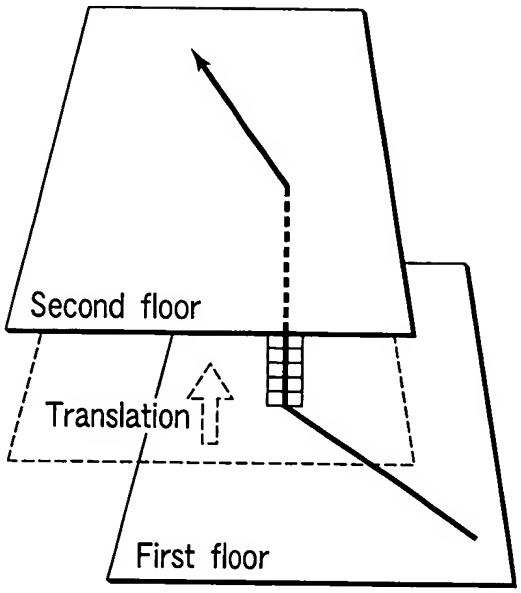

FIG. 22B

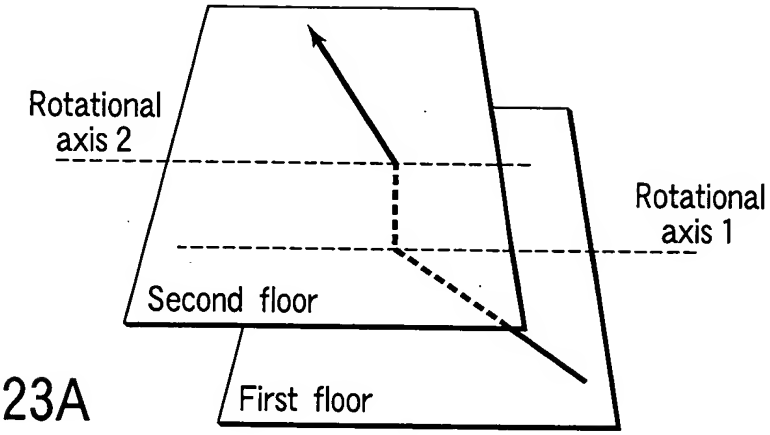

FIG. 23A

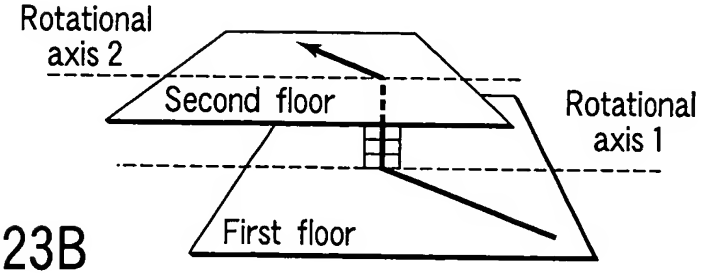

FIG. 23B

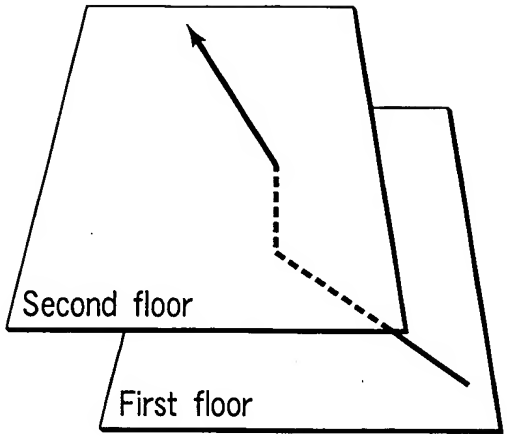

FIG. 24A

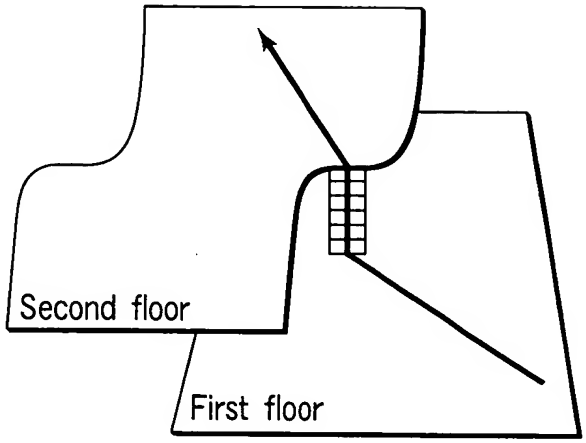

FIG. 24B

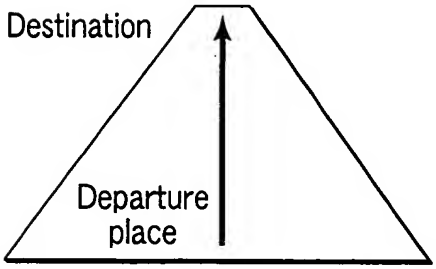

FIG. 25A

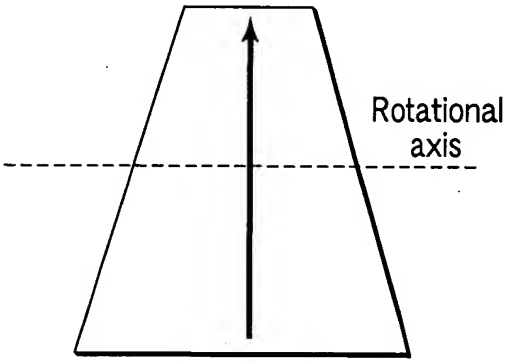

FIG. 25B

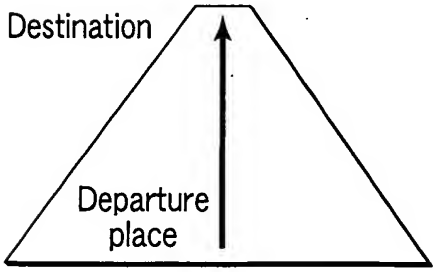

FIG. 26A

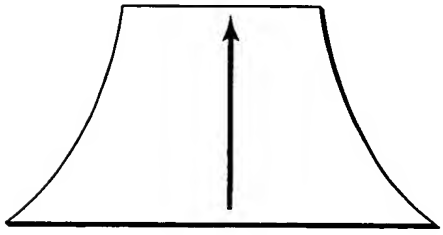

FIG. 26B

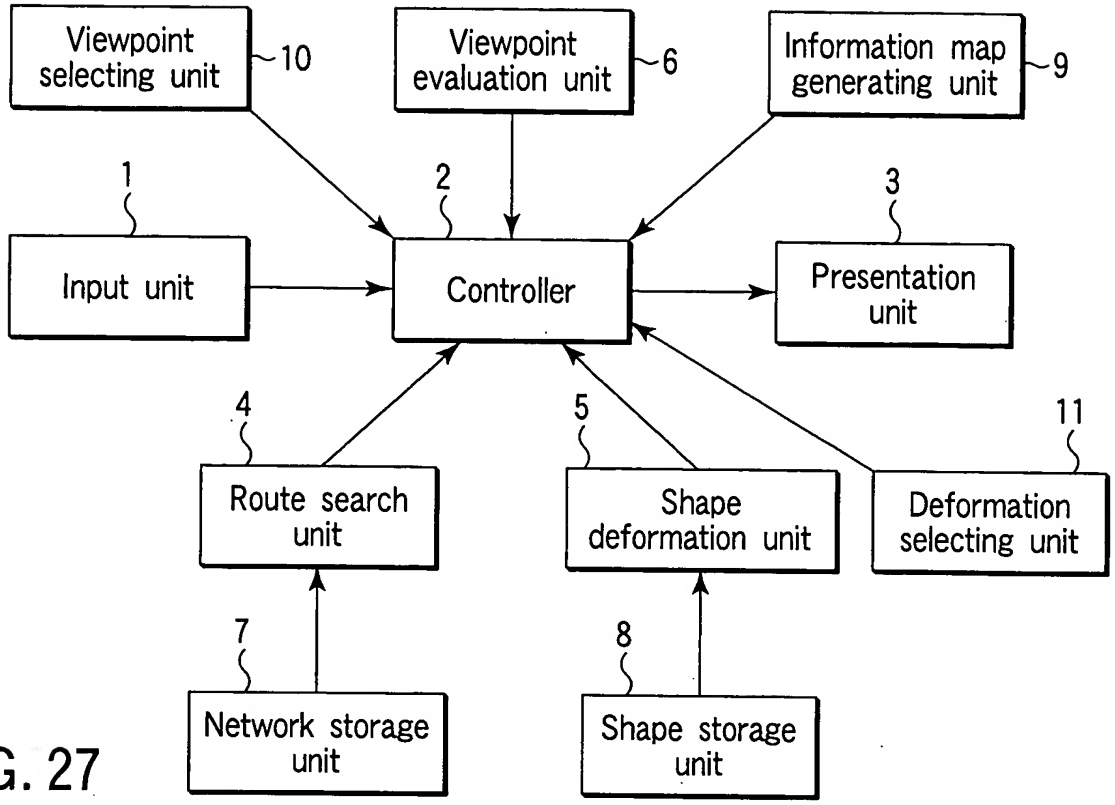
Viewpoint selecting unit
10
Viewpoint evaluation unit
6
Information map generating unit
9
1
2
3
Input unit
Controller
Presentation unit
4
5
11
Route search unit
Shape deformation unit
Deformation selecting unit
7
8
Network storage unit
Shape storage unit

FIG. 27

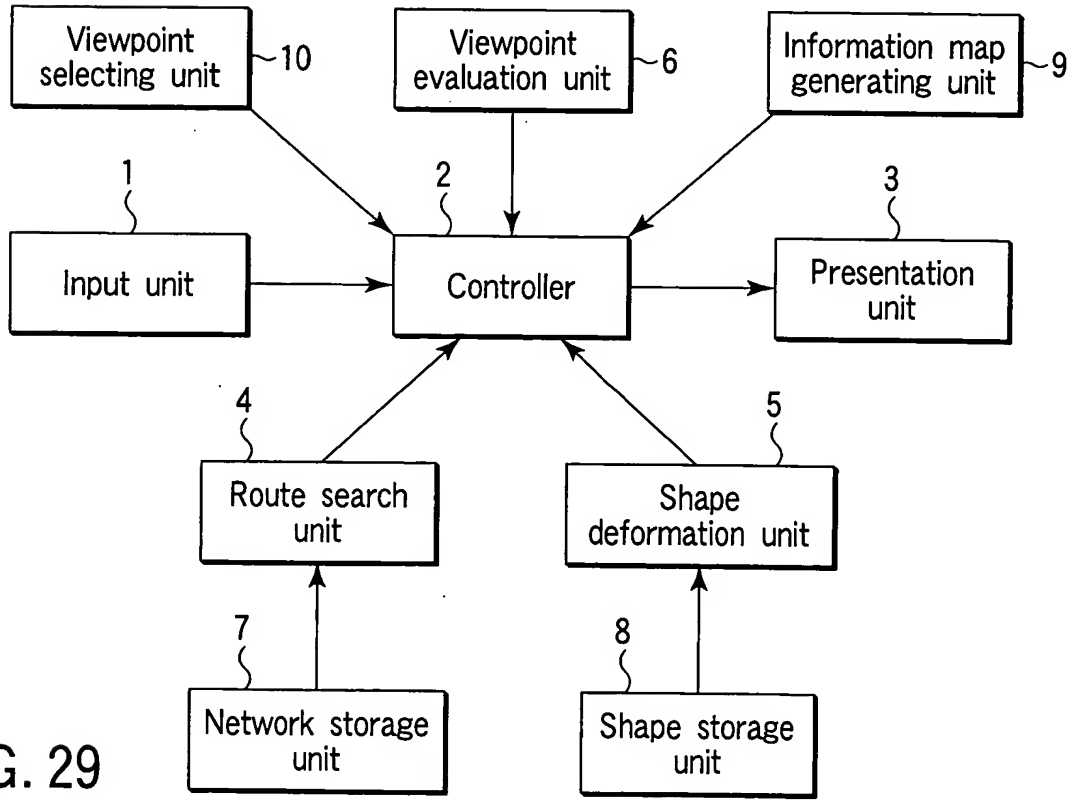
Viewpoint selecting unit
10
Viewpoint evaluation unit
6
Information map generating unit
9
1
2
3
Input unit
Controller
Presentation unit
4
5
Route search unit
Shape deformation unit
7
8
Network storage unit
Shape storage unit

FIG. 29

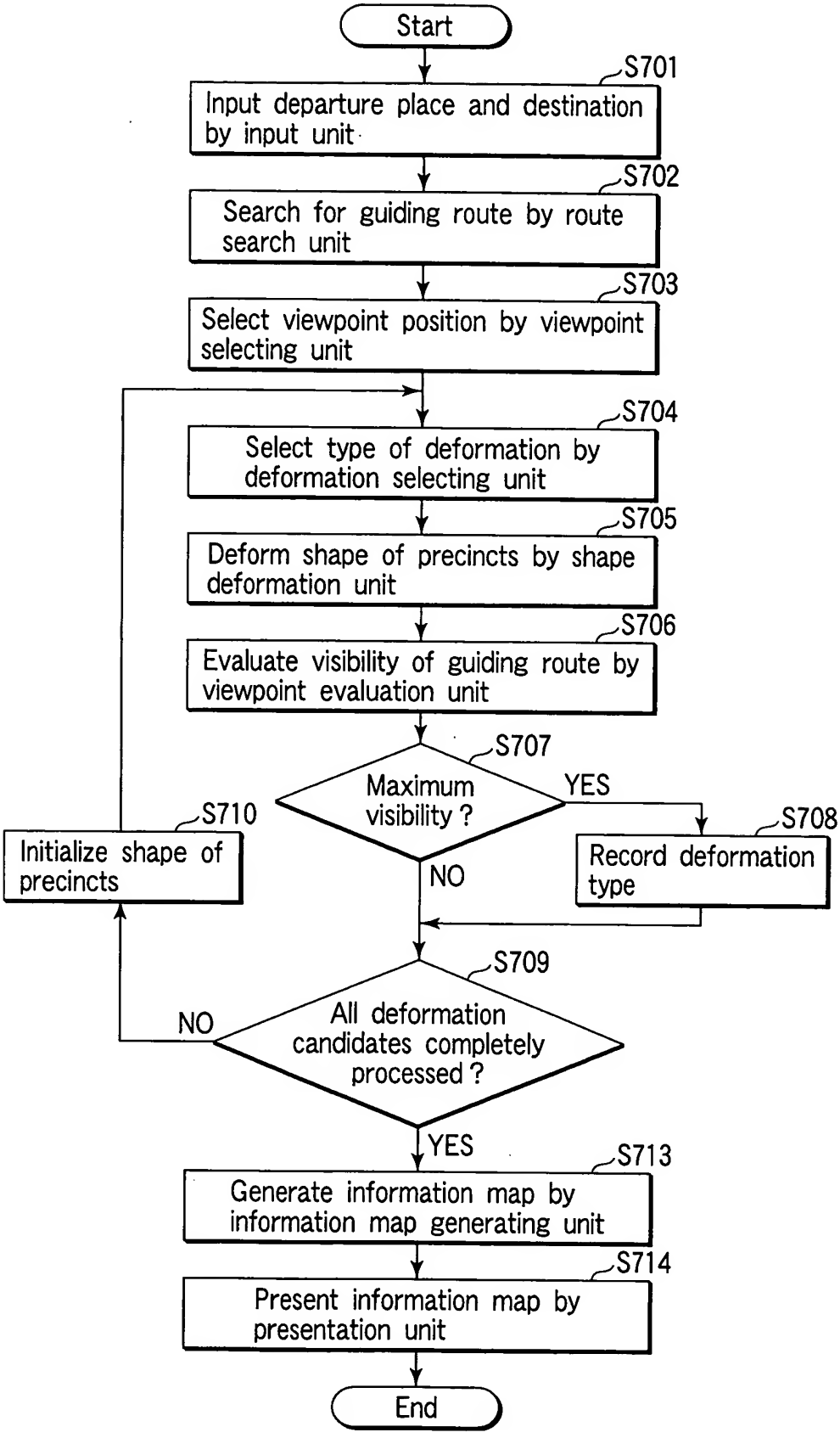
Start
S701
Input departure place and destination by input unit
S702
Search for guiding route by route search unit
S703
Select viewpoint position by viewpoint selecting unit
S704
Select type of deformation by deformation selecting unit
S705
Deform shape of precincts by shape deformation unit
S706
Evaluate visibility of guiding route by viewpoint evaluation unit
S707
Maximum visibility ?
YES
S708
Record deformation type
NO
S709
All deformation candidates completely processed ?
NO
S710
Initialize shape of precincts
YES
S713
Generate information map by information map generating unit
S714
Present information map by presentation unit
End

FIG. 28

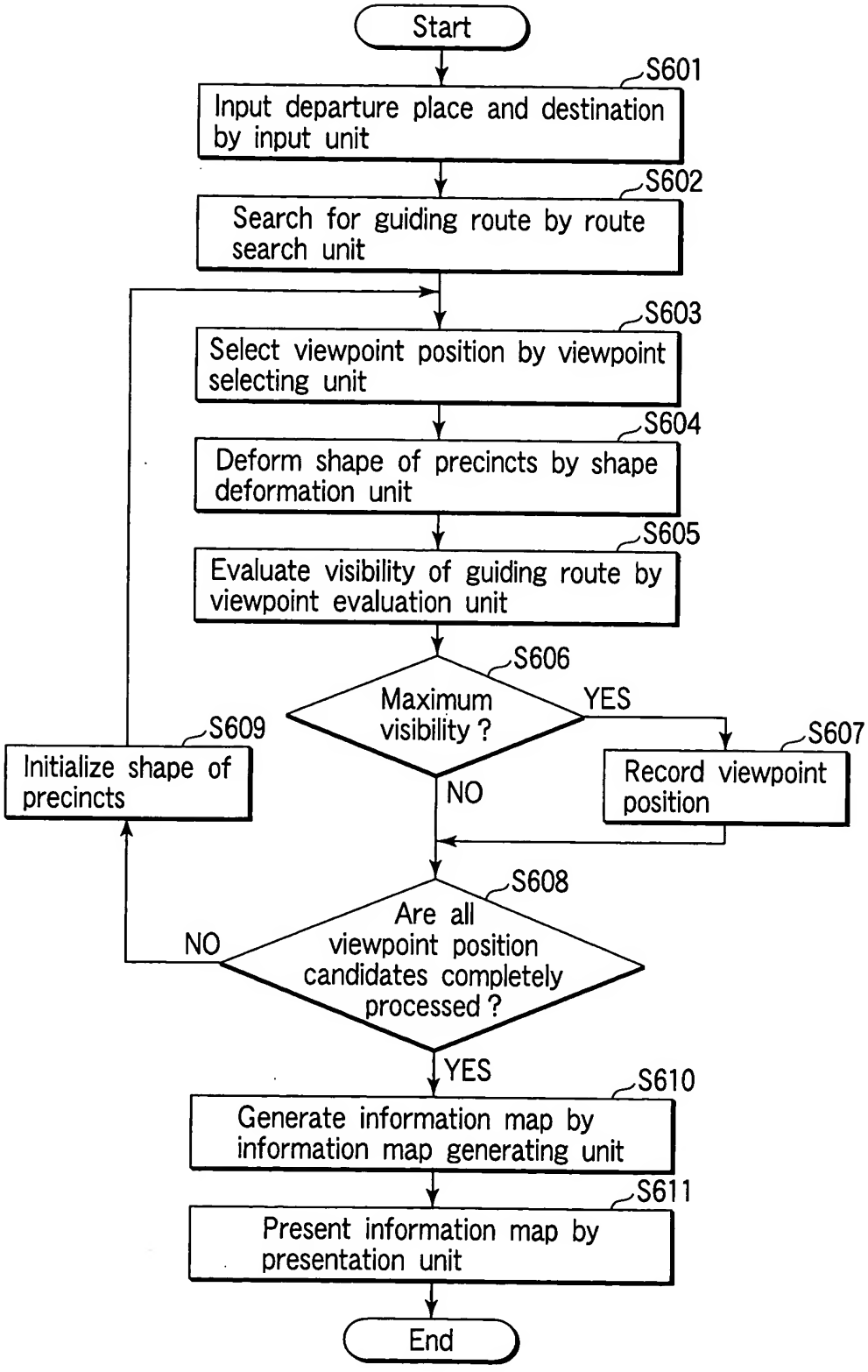
Start
S601
Input departure place and destination by input unit
S602
Search for guiding route by route search unit
S603
Select viewpoint position by viewpoint selecting unit
S604
Deform shape of precincts by shape deformation unit
S605
Evaluate visibility of guiding route by viewpoint evaluation unit
S606
Maximum visibility ?
YES
NO
S607
Record viewpoint position
S608
Are all viewpoint position candidates completely processed ?
NO
S609
Initialize shape of precincts
YES
S610
Generate information map by information map generating unit
S611
Present information map by presentation unit
End

FIG. 30

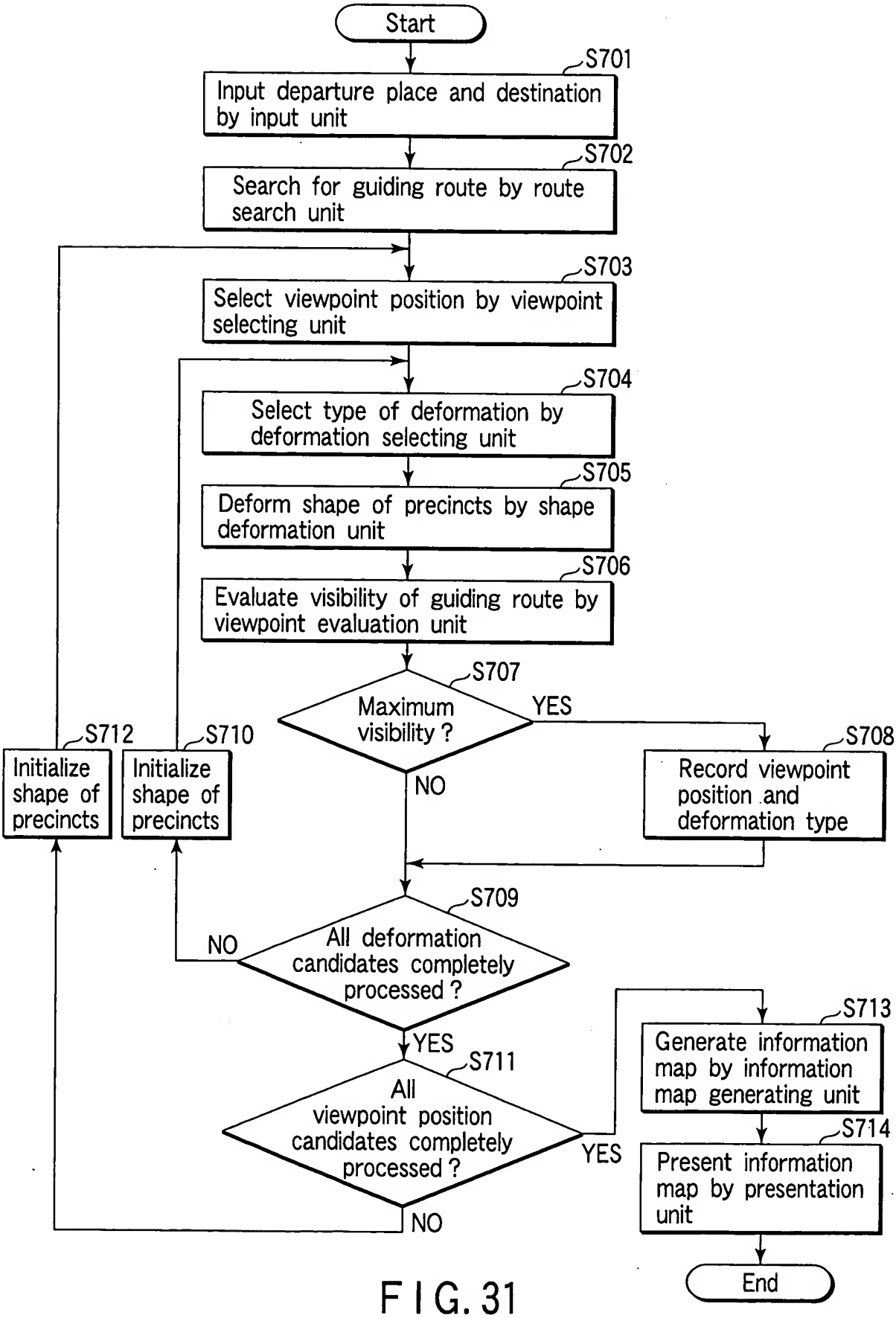
Start
S701
Input departure place and destination by input unit
S702
Search for guiding route by route search unit
S703
Select viewpoint position by viewpoint selecting unit
S704
Select type of deformation by deformation selecting unit
S705
Deform shape of precincts by shape deformation unit
S706
Evaluate visibility of guiding route by viewpoint evaluation unit
S707
Maximum visibility ?
YES
NO
S708
Record viewpoint position and deformation type
S709
All deformation candidates completely processed ?
NO
YES
S710
Initialize shape of precincts
S711
All viewpoint position candidates completely processed ?
YES
NO
S712
Initialize shape of precincts
S713
Generate information map by information map generating unit
S714
Present information map by presentation unit
End

FIG. 31

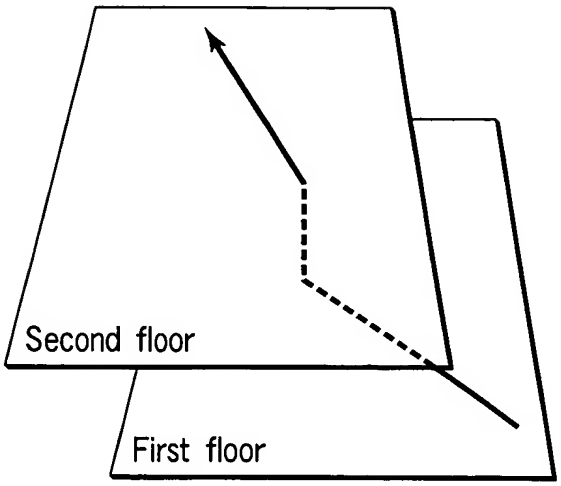

FIG. 32A

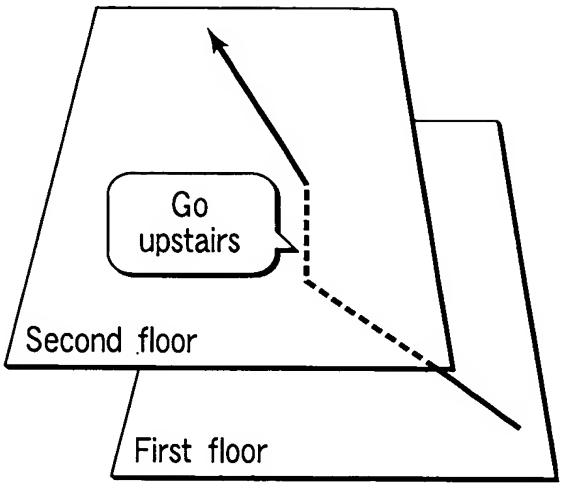

FIG. 32B

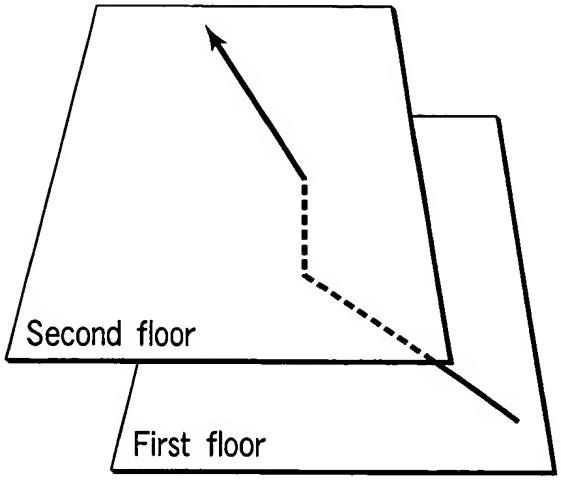

FIG. 33A

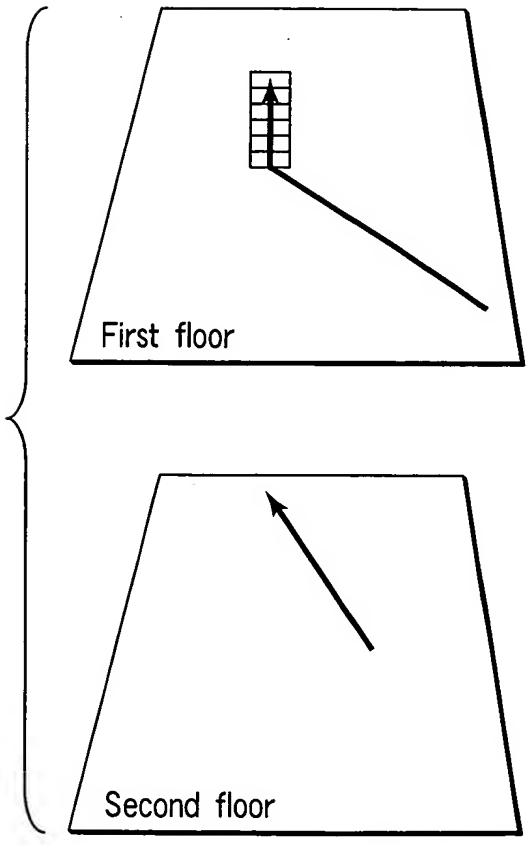

FIG. 33B